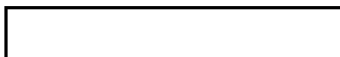


**SECRET**

MONTHLY REPORT



PAR 210

1 May 64

SUBJECT: Lamination of Glass Slides

TASK/PROBLEM

1. Develop an inexpensive piece of equipment and/or technique to laminate or mount film to prevent buckling when film is used with a Teleprompter projector.

DISCUSSION

2. Successful bonding between a film print and glass slide has been achieved by using a gelatin coated glass plate. The process consists of wetting the gelatin coating of the glass plate, then joining the film and glass in the laminating equipment. A variety of techniques for wetting the gelatin have been explored. The most promising ones are:

- a. To flow a water and alcohol mixture over the gelatin surface,
- b. To hold the glass plate in the vapors of a hot bath of alcohol water.

3. The chatter in the lamination equipment noted in the last report has been eliminated.

4. A Teleprompter projector was received and has been operated to test the durability of the film-to-glass bond. The projector was modified slightly to improve slide cooling. Before modifications, temperature measurements of the slide in the Teleprompter projector indicated a surface temperature of 240F. By repositioning the internal blower and adding an air-deflecting cove in the front end of the air chamber, the slide temperature was reduced to about 140F. The addition of the external blower has further reduced this temperature to about 110F. This temperature appears low enough to permit indefinite projection of slides without damage.

5. During the last week of the month, we were visited by a customer's representative who came to observe and comment upon this project.

**SECRET**

**GROUP-1**  
Excluded from automatic downgrading  
and declassification

~~SECRET~~

PAR 210

1 May 64

PLANNED ACTIVITY

6. During the next month we will perform further tests on the lamination process to determine necessary and optimum drying times of the slides after lamination. We will also attempt to learn the source of a multiplicity of small bubbles which develop in the gelatin coating of some glass slides during extended projection. We will explore the possibilities of increasing the air output of the internal blower to achieve better cooling with that blower alone.

**SECRET**

**GROUP-1**  
Excluded from automatic downgrading  
and declassification